

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. James Babineau on 3/12/2010.

**The application has been amended as follows:**

2. **The following claims have been amended and a complete list of the claims is provided below:**

LIST OF CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

1. (Currently Amended) A brush head attachment for an electric toothbrush, the brush head comprising  
a brush head support including a support mounting structure ;  
a bristle support carrying an array of bristles and mounted for movement on the brush head support, said bristle support comprising multiple bristle support segments movable relative to each other, the multiple bristle support segments including a first support segment that rotates about a first axis, and a second support segment that both rotates about the first axis and that selectively swivels about a second axis, and  
driving elements that change the position of the movable bristle support segments relative to each other as a function of a position of said bristle support,  
wherein said driving elements are provided on the brush head support and on at least one of the bristle support segments and wherein said driving elements comprise a cam control surface and an engagement element cooperating with the cam control surface ~~therewith~~ .
2. (Currently Amended) The brush head of claim 1 wherein the bristle support is mounted for rotation about ~~an~~ the first axis ~~of rotation~~, and wherein the cam control surface is arranged on an arc about the first axis ~~of rotation~~.
3. (Previously Presented) The brush head of claim 1 wherein multiple bristle support segments are adapted to be driven in dependence upon rotary position of the bristle support, with the cam control surface including several sections, one of which sections being associated with a corresponding one of the bristle support segments.
4. (Previously Presented) The brush head of claim 1 wherein the cam control surface and the engagement element cooperating therewith are always in relative engagement and act in opposed directions of movement.

5. (Previously Presented) The brush head of claim 1 wherein the cam control surface and the engagement element cooperating therewith are disengageable from each other and maintained in relative engagement by reaction forces developing while brushing the teeth.

6. (Currently Amended) The brush head of claim 1 wherein construction of the driving elements and mounting of the movable bristle support segments are such that upon rotation of the bristle support about ~~an~~ the first axis ~~of rotation~~, at least some of said bristle support segments execute a poking motion in a direction of the first axis ~~of rotation~~.

7. (Previously Presented) The brush head of claim 1 wherein the bristle support has a neutral position from which the bristle support is drivable in oscillatory manner in opposite directions, and wherein the cam control surface is configured such that a bristle support segment driven by the cam control surface obtains a maximum stroke position in the neutral position of the bristle support while occupying a minimum stroke position when displacement of the bristle support from its neutral position is at a maximum.

8. (Previously Presented) The brush head of claim 1 wherein the bristle support has a neutral position from which the bristle support is drivable in oscillatory manner in opposite directions, and wherein the cam control surface is configured such that a bristle support segment driven by the cam control surface obtains a minimum stroke position in the neutral position of the bristle support while occupying a maximum stroke position when displacement of the bristle support from its neutral position is at a maximum.

9. (Previously Presented) The brush head of claim 1 wherein multiple ones of the bristle support segments are raised by corresponding cam control surfaces according to a given timed sequence.

10. (Canceled)

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11. (Currently Amended) The brush head of claim 1 ~~10~~ wherein the second axis is a swivel axis that extends in a radial direction, such that bristles on the bristle support segment mounted for swivel movement about the swivel axis swivel in a plane tangential to a circumferential direction of the bristle support.

12. (Currently Amended) The brush head of claim 1 ~~10~~ wherein the second axis is a swivel axis that extends in a direction transverse to the bristle support segment mounted for swivel movement about a swivel axis, such that bristles on that bristle support segment swivel in a direction parallel to a radial plane containing an axis of rotation of the bristle support.

13. (Previously Presented) The brush head of claim 1 wherein the cam control surface comprises a surface of the brush head support.

14. (Previously Presented) The brush head of claim 1 wherein the cam control surface is formed by an element separate from, and fixedly connected with, the brush head support.

15. (Previously Presented) The brush head of claim 1 wherein the engagement element forms a curved engagement surface that is curved in a same direction as, and with about the same curvature radius as, the cam control surface.

16. (Previously Presented) The brush head of claim 1 wherein the cam control surface includes at least two concave depressions and a protuberance connecting said depressions, and wherein the engagement element forms a curved engagement surface whose curvature corresponds approximately to one of said depressions.

17. (Previously Presented) The brush head of claim 1 wherein the driving elements and the movable bristle support segments lie approximately along a longitudinal axis of the brush head when the bristle support is in a non-displaced position.

18. (Previously Presented) The brush head of claim 1 wherein each bristle support segment that cooperates with the cam control surface includes bristles that differ in kind from other bristles of the brush head.

19. (Previously Presented) The brush head of claim 1 wherein each bristle support segment that cooperates with the cam control surface forms a radially outer peripheral portion of the bristle support and carries radially outer bristles.

20. (Previously Presented) The brush head of claim 1 wherein the bristle support includes at least one rigid, immovable bristle support segment having bristle tufts secured thereto.

21. (Currently Amended) A toothbrush comprising  
a handpiece;  
a motor disposed within the handpiece; and  
a brush head comprising  
a brush head support;  
a bristle support connected to the motor, the bristle support carrying an array of bristles and mounted for movement on the brush head support, said bristle support comprising multiple bristle support segments movable relative to each other, the multiple bristle support segments including a first support segment that rotates about a first axis, and a second support segment that both rotates about the first axis and that selectively swivels about a second axis;  
and  
driving elements that change the position of the movable bristle support segments relative to each other as a function of a position of said bristle support,  
wherein said driving elements are provided on the brush head support and on at least one of the bristle support segments and wherein said driving elements comprise a cam control surface and an engagement element cooperating with the cam control surface ~~therewith~~.

22. (Previously Presented) The brush head of claim 1 adapted to be releasably attached to a handpiece of an electric toothbrush.

23. (Previously Presented) The brush head of claim 2 wherein the bristle support is adapted to be driven in an oscillatory rotational motion.

24. (Currently Amended) The brush head of claim 2 wherein the first axis of rotation lies in a direction transverse to a longitudinal axis of the brush head.

25. (Previously Presented) The brush head of claim 2 wherein the cam control surface is formed on the brush head support.

26. (Previously Presented) The brush head of claim 3 wherein the bristle support segments adapted to be driven in dependence upon the rotary position of the bristle support include one pair of bristle support segments arranged at diametrically opposite sides of the bristle support.

27. (Previously Presented) The brush head of claim 13 wherein the cam control surface is formed directly by a section of a bristle support mounting structure of the brush head support.

28. (Previously Presented) The brush head of claim 18 wherein each bristle support segment that cooperates with the cam control surface carries bristles that protrude, in a longitudinal direction of the bristles, beyond other bristles of the brush head.

29. (Previously Presented) The brush head of claim 18 wherein each bristle support segment that cooperates with the cam control surface carries bristles of greater stiffness than other bristles of the brush head.

30. (New) The brush head of claim 1 wherein the first axis is perpendicular to the second axis.

### **REASONS FOR ALLOWANCE**

3. The following is an examiner's statement of reasons for allowance:
  - a. The prior art fails to provide the driving elements, in the form of a cam control surface and a cooperating engagement element, on the brush head support and at least one bristle support segment. In the cited reference the characteristics of movement of the bristle support segments are all determined by aspects of connection with the drive shaft and between the segments – not by a cam surface or follower provided on the brush head support.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEE D. WILSON whose telephone number is 571-272-4499. The examiner can normally be reached on M-TH.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MONICA CARTER can be reached on 571-272-4475. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ldw

/LEE D WILSON/  
Primary Examiner, Art Unit 3727

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